

# ***Controlling the Project Pipeline: Managing Constraints to Maximize Outputs***

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# Objectives

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- Hear why projects should only be launched at a rate that can be handled by the organizational system
- Understand the value of periodic measurement of project status and performance
- Develop critical parameters for evaluation



# Agenda

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1. What is Project Portfolio Management (PPM)?
2. The Context of PPM
3. What are Constraints?
4. Managing Constraints in the PPM Process
5. Critical Success Factors for Managing Constraints



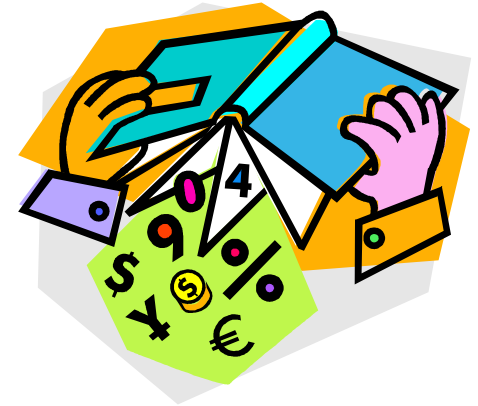


# 1. What is PPM?



# Project Definition

- From PPM Point of View:



*"A composite of resource investments  
such as skilled labor and associated  
salaries"*



# What is Project Portfolio Management?

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- 'Portfolio Management' is a technique for:

“[t]he centralized management of one or more portfolios, which includes identifying, prioritizing, authorizing, managing, and controlling projects, programs, and other related work, to achieve specific strategic business objectives.”

 ***Abbreviated as “PPM”***

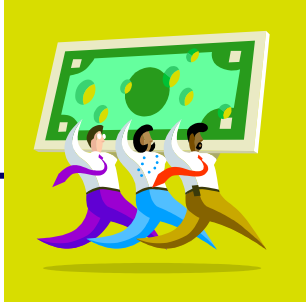


# PPM Objectives

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- Translate strategic goals into tangible criteria to select programs/projects that create value for the enterprise
- Select and prioritize projects for competitive advantage
- Perform regular project reviews
- “Unfund” bleeder projects and those no longer strategically aligned





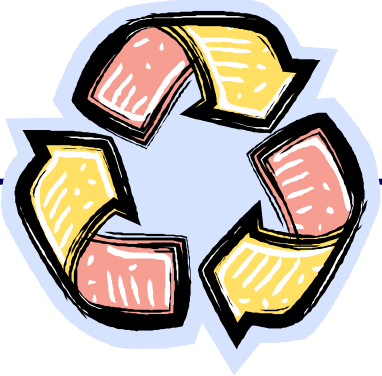
# Portfolio Planning Team

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- The Executive Team – or a subset thereof
- Decisions from strategic planning become the factors for selecting projects
- Decisions for project investments no longer made within the functional silos
- Investment decisions made collaboratively, with the ***total*** enterprise in mind

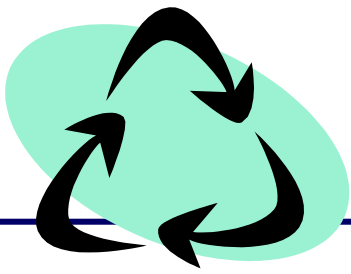




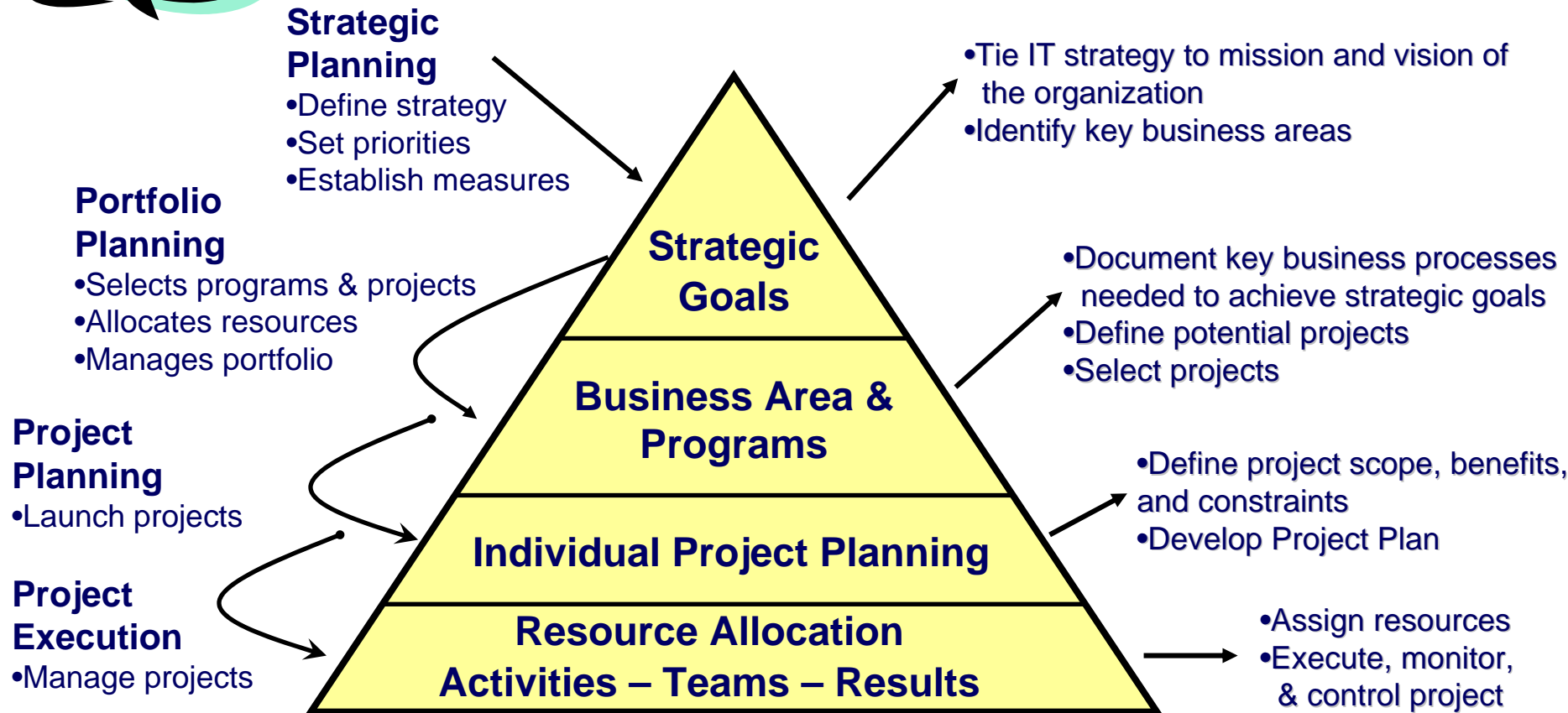


## 2. The Context of PPM

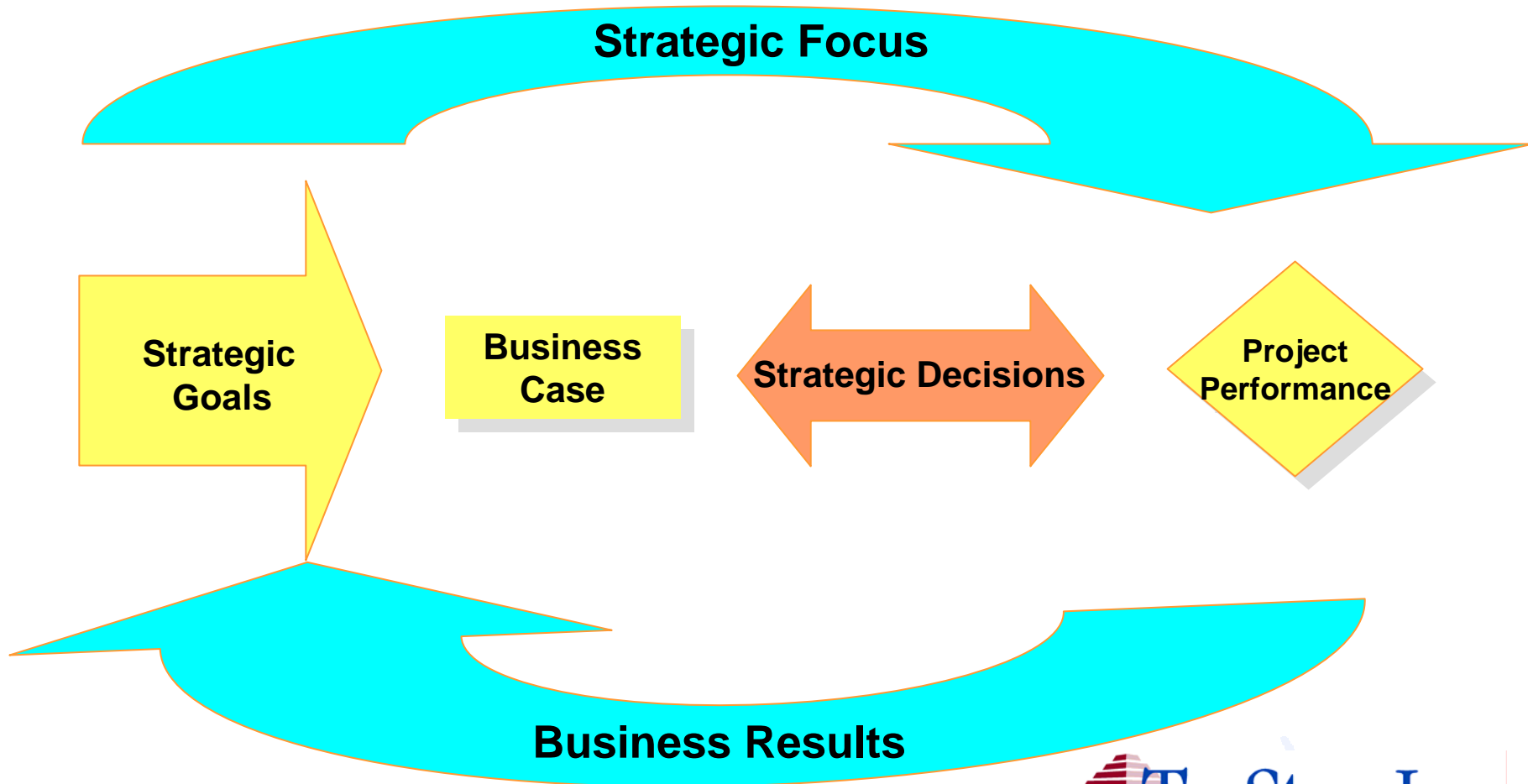




# The Context of PPM



# The View at 90,000 Feet



# Strategic Planning

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- Focuses on the reason that the organization exists
- Defines the vision, mission, guiding principles, values, objectives and success measures of the organization
- Provides the foundation to manage the organization's investments (projects)
- Measures organizational performance against the strategic plan



# Strategic Planning Steps

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- Vision
- Mission
- Guiding Principles and Values
- Strategy to Implement Vision
- Performance Measures for the Enterprise



# Portfolio Planning

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## Project Selection Goals

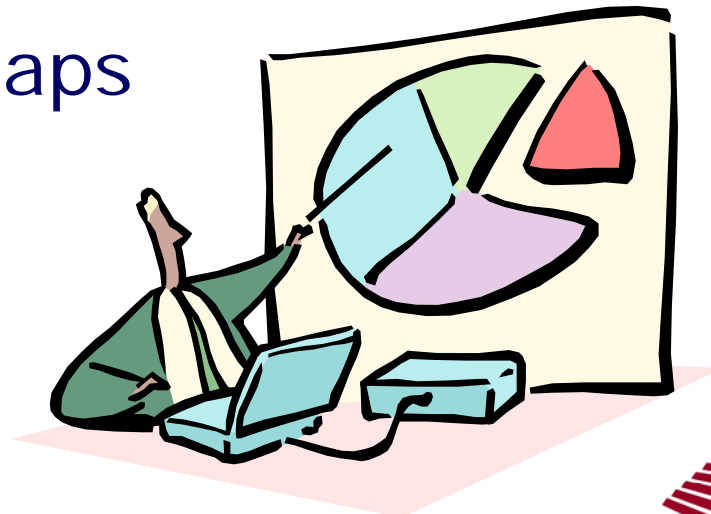
- Value Maximization
- Balance
- Strategic Alignment



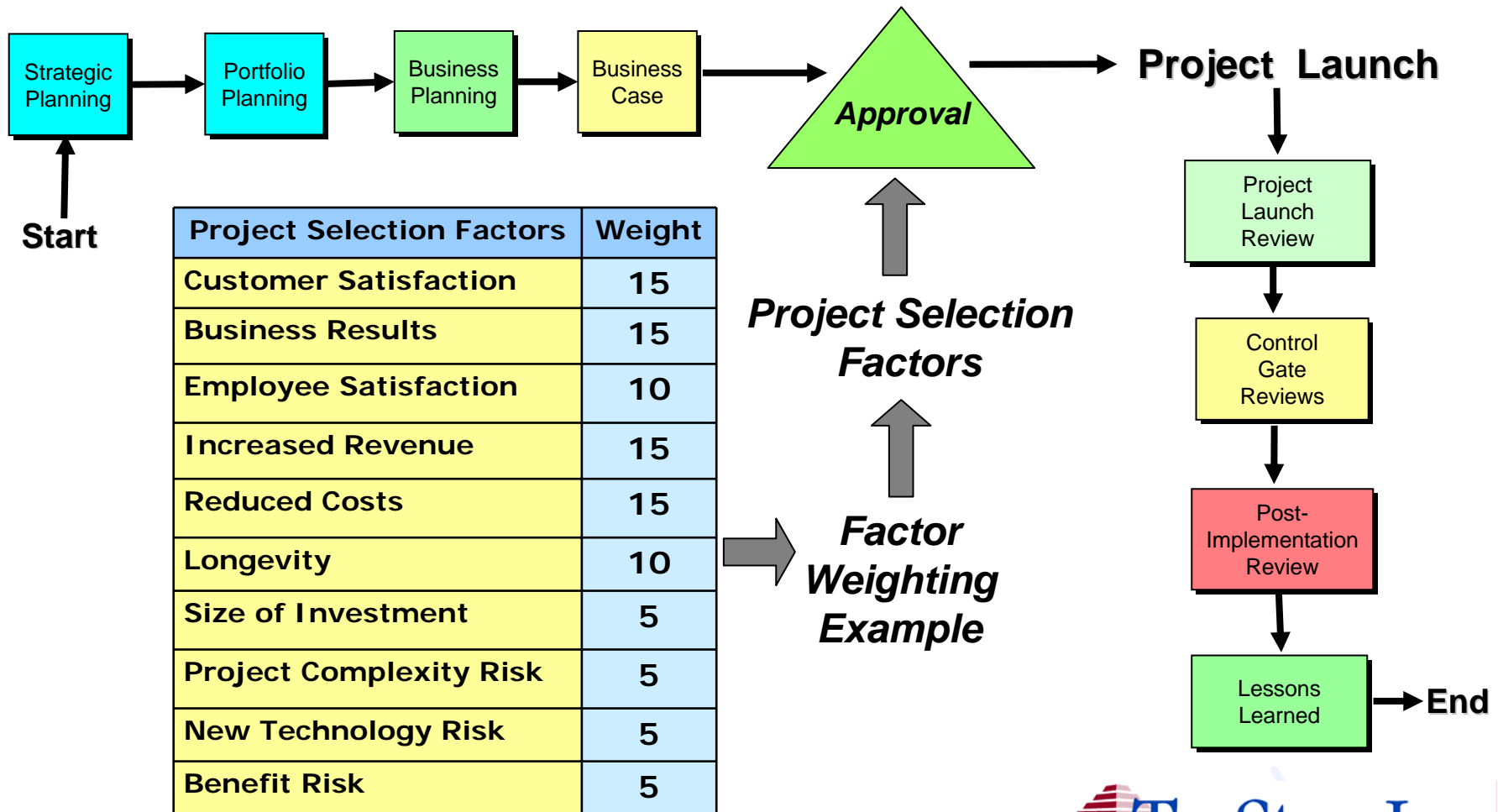
# Project Selection Components

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- Opportunity Analysis
- Project Prioritization
- Prioritization Decision Support Tools
- Portfolio Maps



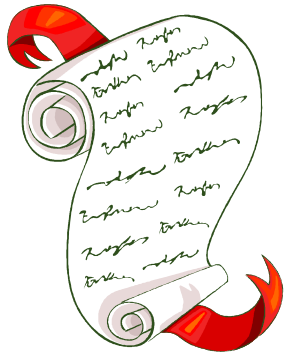
# Portfolio Management Process





# Project Selection

## Assessment of Project's Strategic Fit



**INPUT**

Project Selection Factors	Score (1-5)
Customer Satisfaction	5
Business Results	5
Employee Satisfaction	3
Increased Revenue	4
Reduced Costs	4
Longevity	5
Size of Investment	3
Project Complexity Risk	3
New Technology Risk	4
Benefit Risk	4

**OUTPUT**



**Go/No Go Decision**

**Portfolio Planning Team**

**Project Manager**

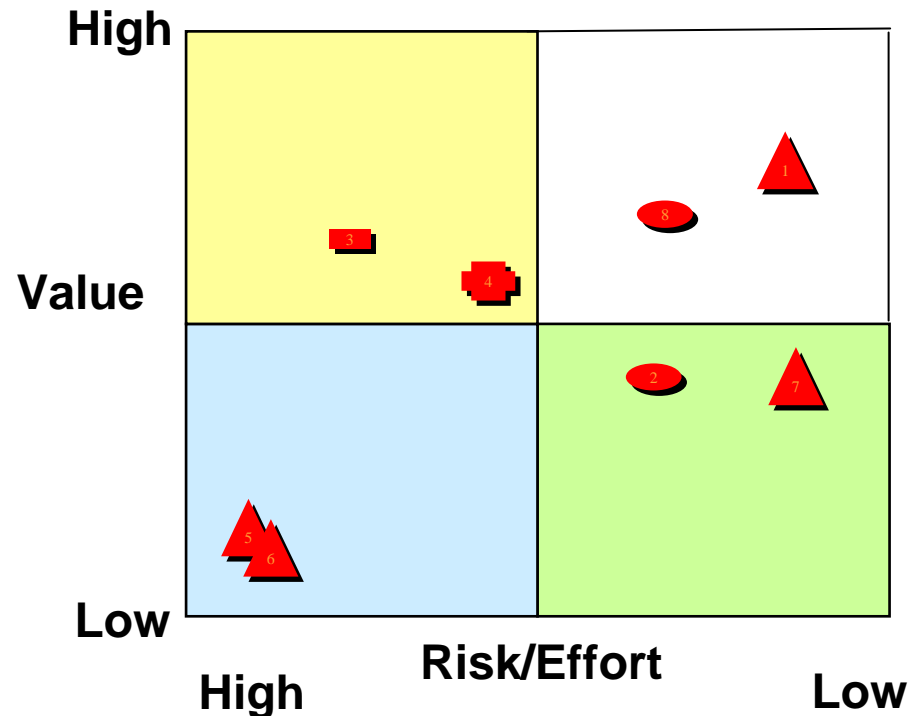


# Typical PPM Outputs/Tools

## Portfolio Map

### Top Ten Projects

1. Project A
2. Project B
3. Project C
4. Project D
5. Project E
6. Project F
7. Project G
8. Project H
9. Project I
10. Project J



109 Approved  
& Active  
Projects by  
Division

- ▲ Div. A
- Div. B
- Div. C
- Div. D



# Results

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- Strategically-balanced project investments
- Targeted and controlled resource management
- Executive program control
- Business results achieved
- Strategies attained





### 3. What are Constraints?



# PMBOK Definition of Constraint

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*"An applicable restriction or limitation, either internal or external to the project, that will affect the performance of the project or a process."*

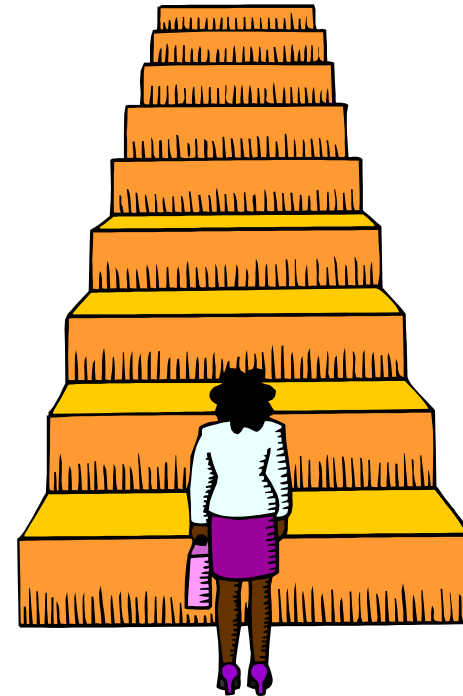


– *PMBOK Guide®, Third Edition, 2004, p. 355.*



# Types of Constraints

- Process
- Physical
- Cultural
- Organizational
- Project specific



# Process Constraints

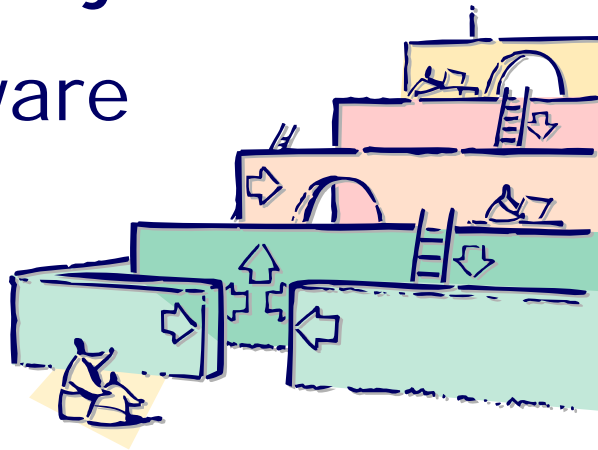
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- Poorly defined strategic objectives
- Poor business planning – lack of solid business cases for potential projects
- Lack of cross-enterprise view
- Unknown project inventory
- Lack of understanding of existing resource commitments
- Lack of supporting processes



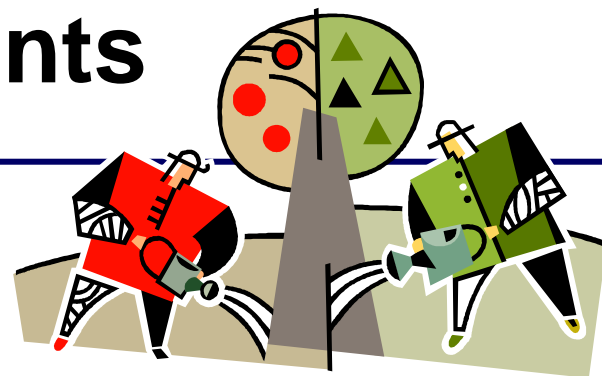
# Physical Constraints

- Infrastructure
- Availability vs. project timeframes
  - Computer hardware
  - Other materiel





# Cultural Constraints



- Democracy isn't easy
  - Removes power from business leaders who are used to calling the shots
- It's hard to make difficult decisions
  - Which projects to undertake
  - Which to cancel
- Any new process will be resisted



# Organizational Constraints

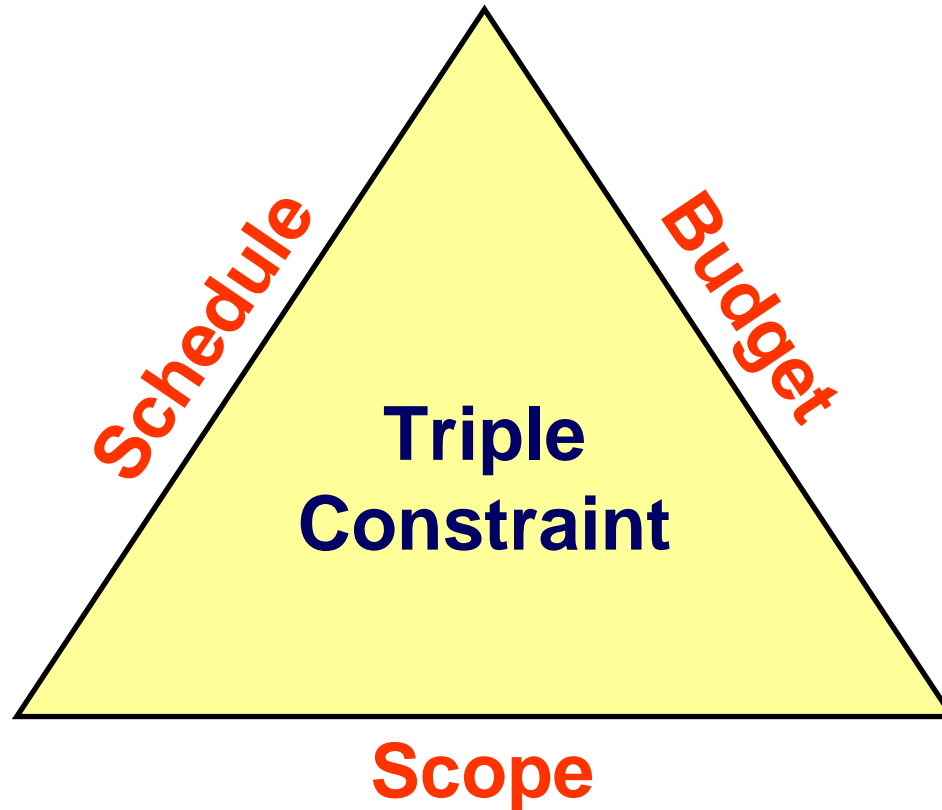
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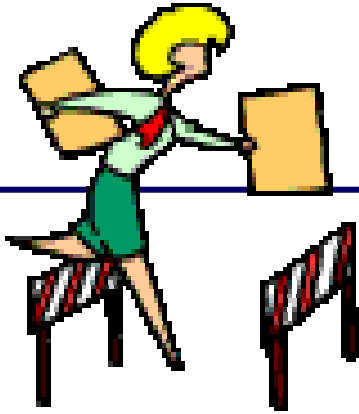
- Resources
  - Skills
  - Availability
- Risk
  - Organizational tolerance



# Project-Specific Constraints

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## 4. Managing Constraints in the PPM Process



# Managing Process Constraints

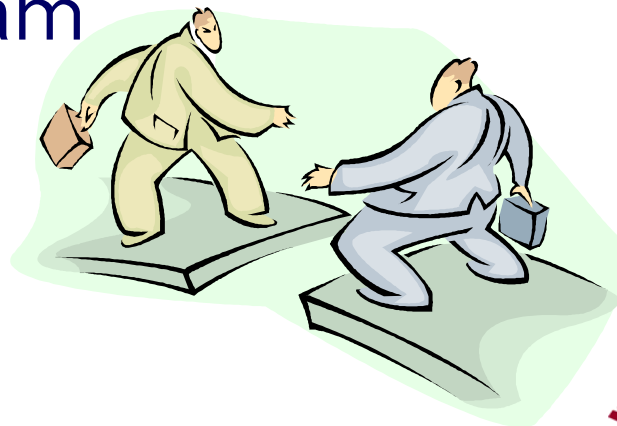
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## *Issue:*

- Poorly-defined strategic objectives

## *Solution:*

- Clarify organizational strategy with Executive Team

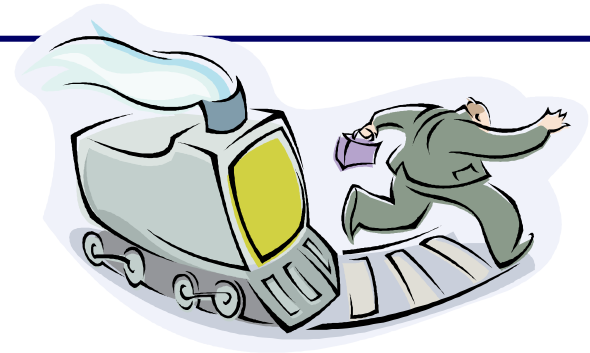


# Managing Process Constraints

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## *Issues:*

- Poor business planning
- Lack of solid business cases for potential projects



## *Solutions:*

- Require business case preparation
- Train staff on developing them



# Managing Process Constraints

## *Issues:*

- Lack of cross-enterprise view
- Unknown project inventory
- Lack of understanding of existing resource commitments



## *Solutions:*

- Launch an effort to identify all current projects and their assigned staff
- Define an ongoing function to keep the information up to date

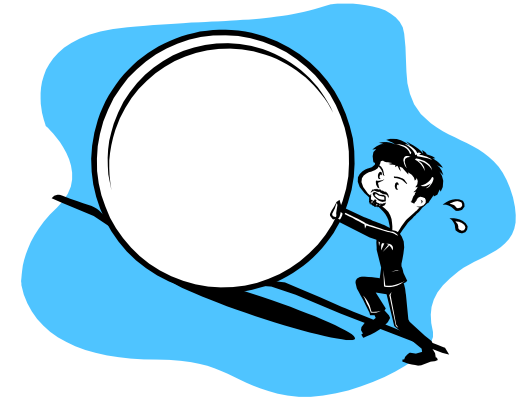


# Managing Process Constraints

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## *Issue:*

- Lack of support processes



## *Solution:*

- Define a 'cradle-to-grave' process to support PPM
- Identify needed support functions, roles, and responsibilities
- Staff the process accordingly





# Managing Process Constraints

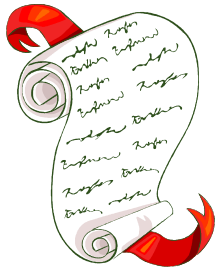
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- Project Selection:
  - Require business cases as input
  - Evaluate constraints in business cases and project selection decisions



# Additional Elements for Project Selection



**Project Charter**

STRATEGIC GOALS	Score (1-5)
Customer Satisfaction	5
Business Results	5
Employee Satisfaction	3
Increased Revenue	4
Reduced Costs	4
Longevity	5
Size of Investment	5
Project Complexity Risk	5
New Technology Risk	5
Benefit Risk	4

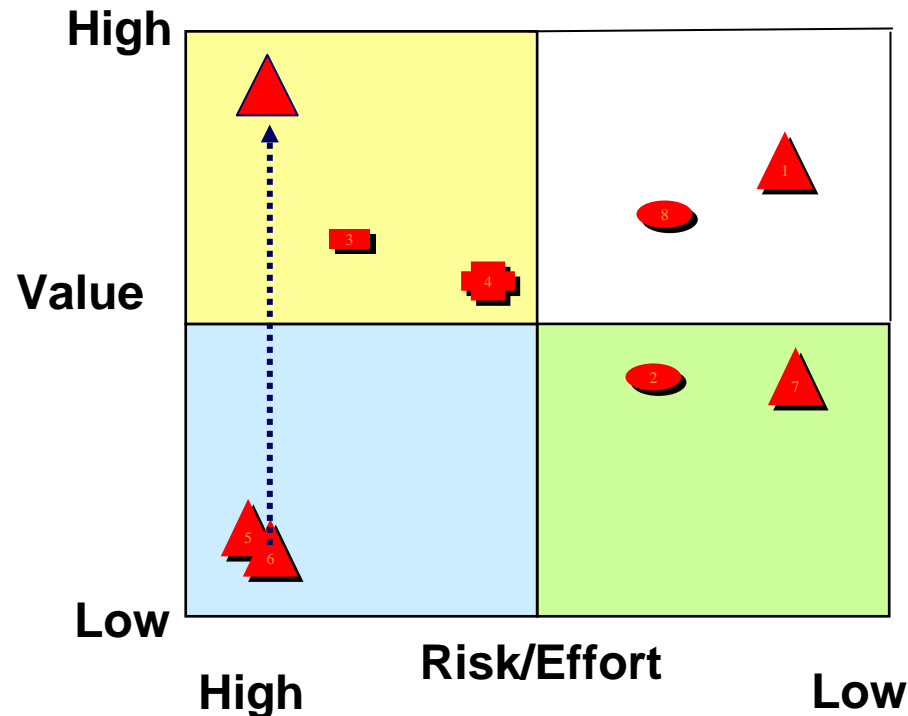


CONSTRAINTS	Score (1-5)
Resource Capacity	2
Risk Tolerance	4
Cultural Issues	3
Infrastructure	4
Rigor of Business Case	4
Material Availability	5
Triple Constraint	5



# Reevaluate Project's Placement in Portfolio

*Portfolio Map*



# Managing Physical Constraints

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## *Issue:*

- Projects with infrastructure needs that are not part of the enterprise architecture

## *Solution:*

- Assess cost of making the required changes in the business case
- Only accept projects whose infrastructure aligns with the enterprise's infrastructure



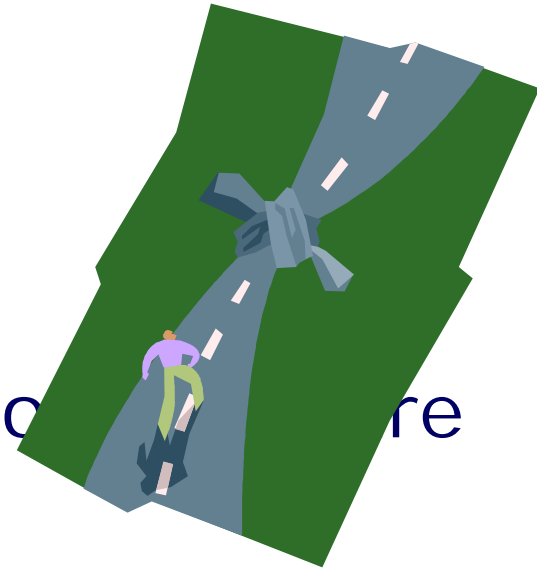
# Managing Physical Constraints

## *Issue:*

- Hard resources are not available as needed by the project

## *Solution:*

- Find alternative solution
- Postpone project start until resources are available



# Managing Cultural Constraints

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## *Issue:*

- New processes are always resisted

## *Solution:*

- Use a change management approach to deploy PPM
  - Education
  - Persuasion
  - Accountability structure



# Managing Organizational Constraints

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## *Issue:*

- Resources with the necessary skill sets are not available in the project time frame

## *Solution:*

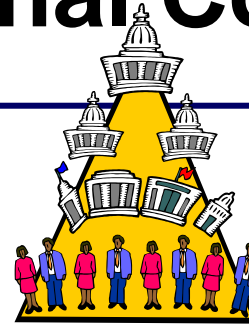
- Hire (staff or contract)
- Train existing staff
- Postpone the project until resources are available



# Managing Organizational Constraints

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## *Issue:*



- Building a portfolio with an acceptable level of organizational risk

## *Solution:*

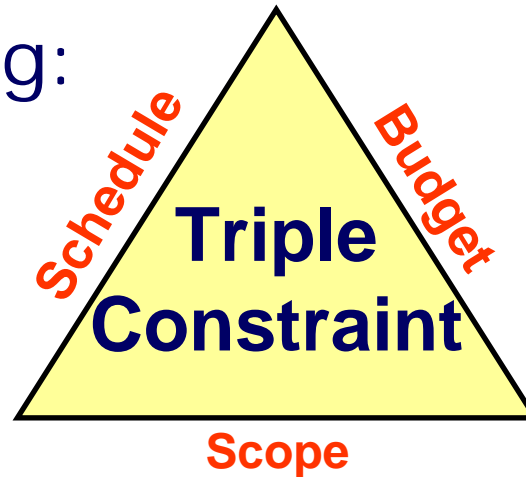
- Understand how much risk the organization can tolerate
- Use level of project risk as a selection criterion





# Managing Project-Specific Constraints

During Planning:



- Address constraints as part of Scope Definition, Cost Estimating, Scheduling and Risk Management
- Communicate clearly about constraints
- Enlist support of Project Sponsor to navigate constraints



# Managing Project-Specific Constraints

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During Execution, Monitoring, & Control

- Sponsor Steering Committee Reviews
- Control Gate Reviews
- Portfolio Reviews
- Ongoing Post-Implementation Reviews



# Sponsor Steering Committee Reviews

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- ***Monthly*** Project Reviews with Project Sponsor and Team Leaders to:
  - Review Last Month Progress
  - Review Next Month Plans
  - Manage Issues
  - *Manage Scope Changes*
  - *Balance customer objectives with enterprise's strategic objectives*
  - Remove Barriers
  - Manage Major Risks
  - Approve Approach for next month
  - *Reanalyze Constraints and their impacts*



# Control Gate Reviews

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- ***Periodic*** Portfolio Management Team Reviews Projects/Programs at Key Milestones to:
  - Review estimates to complete
  - Revisit competitive situation
  - Re-affirm business benefits
  - *Reanalyze constraints and their impacts*
  - *Review scope change decisions*
  - *Update Project Selection Score to identify 'drift' from enterprise's strategic objectives*
  - Approve level of risk
  - Make incremental investments, if appropriate



# Portfolio Reviews

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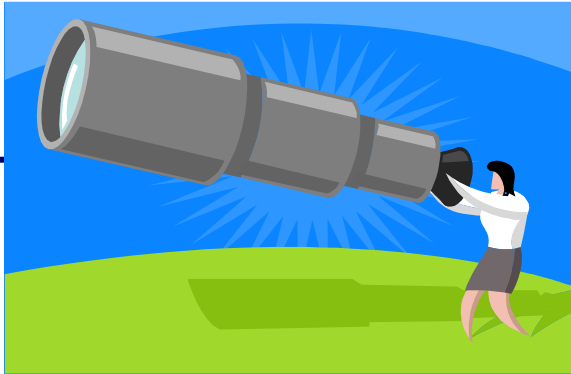
- Review/adjust project selection factors as strategies *and constraints* change
- Review Portfolio Maps
- Adjust Portfolio to optimize performance
- Revisit/cancel programs and projects that are not delivering value



# Ongoing Post-Implementation Reviews

- Track project value add vs. cost
- Determine if project selection and prioritization was on target
- Learn from project experience
- Find underlying causes of problems
- Make suggestions to correct them
- Minimize problems on future projects
- Use each project as a learning opportunity
- *Watch for 'drift' from customer and strategic objectives*
- *Continuously reanalyze constraints and modify plan accordingly*





## 5. Critical Success Factors for Managing Constraints



# Critical Success Factors for Managing Constraints



- Presence of:
  - Strategic objectives
  - Decision criteria
- Solid business cases for all opportunities
- Ongoing tracking of:
  - Project inventory
  - Resource capacity
  - Project performance
- Rigorous project management practices
- Ongoing project reviews
- Willingness to make tough decisions
- Change management approach to PPM implementation





# Future Directions of PPM & PM

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- Enterprise policy, methodology, & tools
- PMO/EPMO establishment
- Project management maturity
- Maturity assessments
- Intensive training
  - Portfolio Management
  - Balanced Scorecard
  - Project Management
  - Team Leadership
  - Team Performance
  - Virtual Teams
- Professional PM career track
- Facilitated project Quickstarts
- Structured team-based planning
- Mentoring
- Executive coaching
- Consistency
- Accountability

